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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,241	12/04/2001	Manish P. Sutaria	03248.00039	7912

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EXAMINER

FIORILLA, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,241

Applicant(s)

SUTARIA ET AL.

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003 and 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of multiple phase composite materials, does not reasonably provide enablement for the process as generically claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

2. Claims 1-5, 7-14 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original specification does not provide support for the limitation of heating at a pressure "of no more than about 30 psi". Page 10 of the specification recites that a pressure of 30psi may be applied in a hot state but makes no reference to pressures between 0 and 30 psi. Thus the claim limitation introduced is not supported.

3. Claims 3-5 and 12-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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The original specification does not provide support for the limitation which recites “wherein the second uniformly suspended mixture forms essentially a continuous phase in the composite”.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the indent beginning “heating the perform...”, the phrase “the thermoplastic polymer binder” has no proper antecedent basis because there are two components of thermoplastic polymer binder (lines 3 and 8) and it is unclear as to which this refers.

In claim 8, the phrase “the one or more processing aids” has no proper antecedent basis because there are two citations of “one or more processing aids” (lines 4 and 9) and it is unclear as to which this refers.

Claim 1 is indefinite in that the preamble refers to components (plural) while the body of the claim (e.g. last line) refers to a component (singular). The claim should be amended so that it is consistent.

Claim 3 is indefinite in that the preamble refers to **components** (plural) while the body of the claim (e.g. last line) refers to a **composite** (singular). The claim should be amended so that it is consistent in number and terminology.

Claim 6 is indefinite in that the preamble recites that the article is comprised of a fibrous monolithic material, however the body of the claim indicates that the article is formed by

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providing a fibrous monolithic material but then sintering the material so that the "fibrous monolithic material" would no longer exist and comprise a part of the article.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Applicant's arguments filed 5/28/03 have been fully considered but they are not persuasive.

With respect to the rejection of claims 1-6 under 35 USC 112, first paragraph, applicants argue:

This rejection is understood to mean that the specification is not enabling for processes of pressureless sintering to consolidate and densify fibrous monolith materials. The rejection is respectfully traversed. The specification discloses that "operating parameters of pressureless sintering are adjusted according to the material characteristics of the particular FM composite being sintered. These parameters are dictated in large part by the melting points of the constituents. . . ." (Page, 10, lines 3-5). One of ordinary skill in the art would be able to practice the claimed invention without undue experimentation knowing that the sintering conditions are dependent on the melting points of the particular ceramic powders used in the two or more compositions of the fibrous monolith. One of ordinary skill in the art also would know to refer to any standard handbook or reference text that lists melting points of chemical compounds to identify a desired upper limit for the sintering temperature based on the properties of the two or more compositions of the fibrous monolith. One of skill would be able to select a sintering temperature to avoid heating beyond the melting points of all of the compositions of the fibrous monolith. Furthermore, the specification provides several working examples, including material compositions and sintering temperatures, that would also help guide one of skill in the art in practicing the invention. The Office Action later notes at page 5, "it is well known in the art to sinter at atmospheric pressure." Applicants submit that a person of ordinary skill in the art would be able to practice the invention based on knowledge in the art, as well as guidance provided in the specification at least at page 10 and in the examples. Reconsideration and withdrawal of this rejection is respectfully requested.

This argument is not persuasive. The basis for the rejection is that the specification recites that the invention relates to processes for consolidation and densification of multiple-phase composite materials, including fibrous monolith composites. See e.g. page 2, lines 10-11. Thus the claims should recite that such products are produced. None of the preambles of independent claims 1,3 and 6 recite the word "composite" and thus they are broader than the disclosure. This term should be incorporated into the claims to indicate that the product produced is that which is described in the specification.

With respect to the rejection of the claims over art, these rejections have been withdrawn in view of the claim amendments. Note that if the claims are reinstated to their previous form due to new matter rejections, the rejections may be reinstated.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

A handwritten signature in black ink, appearing to read 'CA Fiorilla', with a stylized flourish at the end.

Christopher A. Fiorilla
Primary Examiner
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